

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE JOINT APPLICATION PURSUANT TO 1994	)	
HOUSE BILL NO. 501 FOR THE APPROVAL OF	)	
THE PRINCIPLES OF AGREEMENT, DEMAND SIDE	)	
MANAGEMENT, THE UNION LIGHT, HEAT AND	)	
POWER COMPANY, AND FOR AUTHORITY FOR THE	)	CASE NO. 95-312
UNION LIGHT, HEAT AND POWER COMPANY TO	)	
IMPLEMENT VARIOUS TARIFFS TO RECOVER	)	
COSTS, LOST REVENUES AND RECEIVE	)	
INCENTIVES ASSOCIATED WITH DEMAND SIDE	)	
MANAGEMENT PROGRAMS	)	

O R D E R

On July 19, 1995, an application for approval of a demand-side management ("DSM") plan was filed by The Union Light, Heat and Power Company ("ULH&P"), the Office of the Kentucky Attorney General, the Northern Kentucky Citizens Action Commission, Citizens Organized to End Poverty in the Commonwealth, and two individuals: Susan York and Hazel Buchanan. The DSM plan includes the implementation of specific DSM programs, a collaborative process to consider and develop additional DSM programs, and tariffs which would permit ULH&P to recover DSM program and administrative costs, lost revenues, and incentives. The application was filed pursuant to KRS 278.285, which grants the Commission the authority to review and approve DSM plans and cost recovery mechanisms. The DSM plan would be in effect through December 31, 1999.

The proposed DSM plan and recovery mechanism were developed through a DSM Collaborative comprised of representatives of ULH&P and its customers. The Collaborative will be responsible for



developing and considering additional DSM programs to be implemented in ULH&P's service territory. Customer class subgroups, whose responsibilities will include designing, implementing, and monitoring the performance of DSM programs, will be formed by the Collaborative. In selecting programs for implementation, the subgroups will calculate and give due consideration to appropriate cost-benefit tests.

Under the proposed DSM plan, twelve DSM programs would be implemented in ULH&P's service territory: six programs designed for residential customers and six programs intended for commercial and industrial customers. The residential programs include (1) a conservation and energy education program, (2) an experimental energy conservation rate, (3) direct load control of central air conditioners and heat pumps, (4) a high efficiency heat pump rebate program, (5) a home energy checkup program, and (6) a do-it-yourself energy analysis. The commercial and industrial programs include (1) a high efficiency lighting rebate plan, (2) a thermal energy storage off-peak air conditioning plan, (3) an energy audit plan for small commercial and industrial customers, (4) a customized energy audit plan for medium and large industrial customers, (5) an adjustable speed drive motor incentive plan, and (6) a high efficiency motor incentive plan.

The DSM plan also includes proposed DSM Cost Recovery Riders for gas and electric service which are intended to recover the costs related to all twelve DSM programs, as well as the appropriate levels of lost revenues and incentives associated with



the DSM programs. These riders are applicable to service provided under two sets of gas and electric tariffs, categorized as residential and non-residential service, and are designed to recover the costs of DSM programs implemented for the appropriate customer class. Also included in the application are (1) Experimental Conservation Rate Schedules for gas and electric customers, (2) Tariff Rider IRS (Interruptible Residential Service) permitting bill credits for customers participating in the Peak Energy Conservation Program, and (3) Tariff Rider TES (Thermal Energy Storage) for customers who install a thermal storage cooling system.

Under the DSM plan, lost revenues from decreased sales of natural gas and electricity to residential customers attributable to DSM programs are to be recovered by decoupling revenues from sales. The decoupling mechanism will operate as follows: (1) a base level of non-variable revenue is defined as the non-variable revenue requirement determined in ULH&P's most recent rate case, (2) an annual adjustment will be made by multiplying the base revenue level by (i) a factor obtained by dividing the twelve month average number of residential customers by the average number of residential customers during calendar year 1994 and (ii) a compounded usage-per-customer growth factor, initially set at a positive 0.0175 for electric customers and a negative 0.0156 for gas customers, and (3) the difference between the adjusted level of non-variable revenue and actual non-variable revenue will be divided by estimated MCF or kWh sales for the upcoming twelve-month



period to calculate a residential decoupling reconciliation adjustment factor for gas and electric customers.

At an informal conference on July 26, 1995, ULH&P and other Collaborative members described the proposed DSM programs and the Cost Recovery Mechanism. In particular, ULH&P described the methodology used to calculate the usage-per-customer growth factor in the residential decoupling mechanism.

ULH&P conducted an ordinary least squares regression analysis which indicated a positive growth rate in kWh usage per residential electric customer and a negative growth rate in MCF usage per residential gas customer. ULH&P's eleven-year regression analysis of actual usage data results in the proposed growth factors of a positive 0.0175 for electric customers and a negative 0.0156 for gas customers.

On an annual basis, ULH&P will calculate and file its calculated DSM Cost Recovery Mechanism with the Commission. A balancing account will be created to reconcile differences between actual and estimated amounts of program and administrative costs, incentives, and non-residential lost revenues collected through the mechanism. For residential customers, lost revenues will be collected through the decoupling mechanism. Any over- or under-recovery, with interest applied, will be divided by estimated kWh or MCF sales for a subsequent twelve-month period to determine the DSM balance adjustment to be included in the cost recovery mechanism.



Based upon its review of ULH&P's proposed DSM plan, and being otherwise sufficiently advised, the Commission finds that the proposed DSM plan is reasonable, and should be approved for the period ending December 31, 1999, except as modified below.

The Commission finds that the usage-per-customer growth factor contained in the residential decoupling mechanism should be monitored over the term of the DSM plan. A review of the eleven-year usage data used by ULH&P, and additional data provided in response to a request for information,<sup>1</sup> indicated potential shifts in the rates of change of annual electricity and gas usage per customer in the later years of the period under review. For instance, the rates of change of annual weather-normalized electricity usage per customer appear to decrease beginning around 1990 and a steeper decline in weather-normalized gas usage per customer begins around 1989. Furthermore, actual electricity usage per customer during the last seven years of the review period exhibited considerable fluctuations. Actual gas usage per customer during the last five years of the review period exhibited relatively flat growth.

If these apparent patterns continue, the proposed electric and gas usage-per-customer growth factors could overstate the actual changes in customer usage. Therefore, the Commission finds that an annual recalculation of the electric and gas usage-per-customer growth factors, using actual customer usage data from the most

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ULH&P's Response to Item 1 of the Commission's Order dated September 8, 1995.



current eleven-year period, will sufficiently reflect changes in usage growth rates.

Successful DSM programs should result in lower electricity and gas usage by participating customers. ULH&P's residential decoupling mechanism does not account for such a decline in usage by program participants. Therefore, ULH&P should perform a study which compares the electricity and gas usage patterns of DSM program participants with those of non-participating customers. So that the Commission may track the progress of the study, ULH&P should file reports of preliminary study results with its annual rate recovery filings. The overall results of the study should be presented to the Commission at the end of the current plan in 1999. This information may then be used in the design of a decoupling mechanism that reflects any significant differences in usage patterns between program participants and non-participants in the event the Collaborative requests a continuation of residential revenue decoupling.

IT IS THEREFORE ORDERED that;

1. ULH&P's DSM plan be and hereby is approved as provided in this Order for the period ending December 31, 1999.

2. ULH&P shall recalculate on an annual basis the electric and gas usage-per-customer growth factors contained in the residential decoupling mechanism using customer usage data from the most recent eleven-year period.

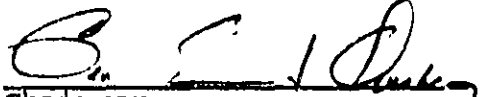
3. ULH&P shall perform a study which compares the electricity and gas usage patterns of DSM program participants with





those of non-participants, and shall present the findings to the Commission in annual update reports and a final report at the end of the DSM plan in December 1999.

Done at Frankfort, Kentucky, this 1st day of December, 1995.

PUBLIC SERVICE COMMISSION

  
Chairman

  
Vice Chairman

  
Commissioner

ATTEST:

  
Executive Director